ARMY AND NAVY CHRONICLE.

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CONGRESSIONAL DOCUMENT.

TELEGRAPHS FOR THE UNITED STATES.

Letter from the Secretary of the Treasury, transmitting a Report upon the subject of a system of Telegraphs for the United States. December 11, 1837. *Read, and laid upon the table.*

TREASURY DEPARTMENT, *December* 6, 1837.

SIR: I have the honor to present this report, in compliance with the following resolution, which passed the House of Representatives on the 3d of February last, viz: "*Resolved*, That the Secretary of the Treasury be requested to report to the House of Representatives, at its next session, upon the propriety of establishing a system of telegraphs for the United States." Immediately after its passage I prepared a circular, with the view of procuring, from the most intelligent sources, such information as would enable Congress, as well as the Department, to decide upon the propriety of establishing a system of telegraphs.

It seems also important to unite with the inquiry the procurement of such facts as might show the expense attending different systems; the celerity of communication by each; and the useful objects to be accomplished by their adoption.

A copy of the circular is annexed, (1.)

The replies have been numerous, and many of them are very full and interesting. Those deemed material are annexed, numbered 2 to 18, inclusive.

From these communications, and such other investigations as the pressure of business has enabled me to make, I am satisfied that the establishment of a system of telegraphs for the United States would be useful to commerce as well as the Government. It might most properly be made appurtenant to the Post Office Department, and, during war, would prove a most essential aid to the military operations of the country.

The expense attending it is estimated carefully in some of the documents annexed; but it will depend much upon the kind of system adopted; upon the extent and location of the lines first established; and the charges made to individuals for communicating information through it which may not be of a public character.

On these points, as the Department has not been requested to make a report, no opinion is expressed; but information concerning them was deemed useful as a guide in deciding on the propriety of establishing telegraphs, and was, therefore, requested in the circular beforementioned. Many useful suggestions in relation to the subject will be found in the correspondence annexed, and in the books there referred to.

The Department would take this occasion to express, in respect to the numerous gentlemen whose views are now submitted to Congress, its high appreciation and sincere acknowledgments for the valuable contributions they have made on a subject of so much interest.

I remain, very respectfully,
Your obedient servant,
LEVI WOODBURY,
Secretary of the Treasury.

The Hon. J. K. POLK,
Speaker of the House of Representatives.

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No. 1.

Circular to certain Collectors of the Customs, Commanders of Revenue Cutters, and other persons.

TREASURY DEPARTMENT, *March* 10, 1837.

With the view of obtaining information in regard to "the propriety of establishing a system of telegraphs for the United States," in compliance with the request contained in the annexed resolution of the House of Representatives, adopted at its last session I will thank you to furnish the Department with your opinion upon the subject. If leisure permits, you would oblige me by pointing out the manner, and the various particulars, in which the system may be rendered most useful to the Government of the United States and the public generally. It would be desirable, if in your power, to present a detailed statement as to the proper points for the location, and distance of the stations from each other, with general rules for the regulation of the system, together with your sentiments as to the propriety of connecting it with any existing department of the Government, and some definite idea of the rapidity with which intelligence could ordinarily, and also in urgent cases, be communicated between distant places. I wish you to estimate the probable expense of establishing and supporting telegraphs, upon the most approved system, for any given distance, during any specified period.

It would add to the interest of the subject if you would offer views as to the practicability of uniting with a system of telegraphs for communication in clear weather and in the day time, another for communication in fogs, by cannon or otherwise; and in the night, by the same mode, or by rockets, fires, &c.

I should be gratified by receivng your reply by the first of October next.

LEVI WOODBURY,
Secretary of the Treasury.

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CONGRESS OF THE UNITED STATES,
IN THE HOUSE OF REPRESENTATIVES,
February 3, 1837.

Resolved, That the Secretary of the Treasury be requested to report to the House of Representatives, at its next session, upon the propriety of establishing a system of telegraphs for the United States.

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Replies.

*No. 2.—B. Silliman.
*No. 3.—Dr. E. Cutbush.
No. 4.—Commodore James Barron.
No. 5.—Captain Hunter, U. S. revenue service.
No. 6.—Captain S. C. Reid.
No. 7.—Dr. R. M. Patterson.
*No. 8.—Isaac McKim.
No. 9.—S. Penistri.
No. 10.—J. R. Parker.
*No. 11.—J. Anderson, collector, Portland.
*No. 12.—Captain Mather, U. S. revenue service.
*No. 13.—Lieutenant Tracy, U. S. revenue service.
*No. 14.—Collector of the customs, Pensacola.
No. 15.—Samuel F. B. Morse.
*No. 16.—Captain Polk, U. S. revenue service.
No. 17.—Samuel F. B. Morse.
No. 18.—Messrs. Servel & Gonon.

The books particularly referred to are—
Lecture by John Pickering, February, 1833.
Treatises by John N. Parker, 1835 and 1836.

*Omitted, as being unimportant. *Ed. A. & N. C.*

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No. 4.

COMMANDANT'S OFFICE, U. S. NAVY YARD,
Philadelphia, March, 21, 1837.

SIR: In reply to the request contained in your circular of the 10th instant, in relation to telegraphs, I have to state, that the system, as exhibited to me by Captain Reid, of New York, appears to be well calculated to answer the object. It is such as is recommended by "Falconer's Marine Dictionary," quite simple, and, I believe, the same which is generally adopted in Europe.

In my opinion, the most important object to be settled

is the selection of proper sites and elevations, which is a matter that can best be determined by experienced engineers, who are well acquainted with the grounds over which the line of telegraphs is to pass.

I have the honor to be, sir,
Very respectfully,
Your obedient servant,
JAMES BARRON.

Hon. LEVI WOODBURY,
Secretary of the Treasury U. S.

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No. 5.

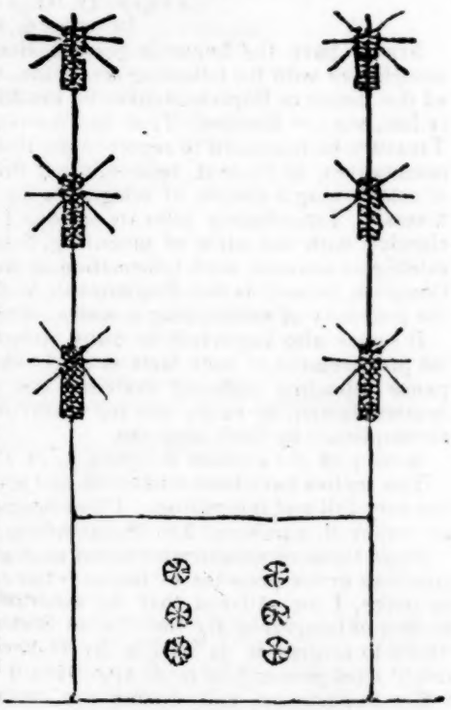
BALTIMORE, *March* 27, 1837.

SIR: I have the honor to acknowledge the receipt of your circular relative to the propriety of establishing a system of telegraphs for the United States. Being unacquainted with the theory or practice of the science, I inquired of a Mr. J. L. Dudley, from whom I have received the following information.

The velocity of communicating by telegraphs is almost incredible, and in many instances might be of great importance to the Government.

For example: Suppose the Mexican Government were to send a fleet to blockade the port of New Orleans; information by a well-organized line of telegraphs could be communicated to Washington in one hour. It is difficult to say where would be the proper points for the location; but it seems to me that if a line was established from New Orleans to New York or Boston, (as this appears the route of the most importance,) the intervening places would then have the advantage mutually. Branches to the seaboard might be attached and connected with the main branch at different points; or a line along the seaboard might be of incalculable advantage to the mariners, underwriters, and merchants, by relieving vessels in distress. But this location would be attended with great expense, much of the land being so low as to require a high building to give a proper elevation; besides, much is to be apprehended from fogs, &c. In the case of a land telegraph, it would be expedient to follow, as nearly as possible, the most direct railroad between any two points of location: much advantage would be derived from it in erecting stations and conducting them. The distance of stations from each other would much depend upon the character of the atmosphere, elevation, and cleared land; but an average of eight miles would be the extent to give surety of communicating at all times in fair weather. It is difficult to suggest any code of regulations by which to regulate the system, as it will depend upon the plan that may be adopted. As to the rapidity with which intelligence could be communicated, it has already been alluded to. Ordinarily it would occupy about ten minutes to the hundred miles; but in urgent cases, with a good atmosphere, and every keeper on the lookout, it might be transmitted in one minute to the hundred miles; but this will materially depend upon the plan and mode adopted. The expense of establishing and supporting a line of telegraphs will much depend upon the location.

The most improved plan is undoubtedly the semaphoric telegraph, invented by Sir Home Popham, of the British navy, in 1816, which was immediately adopted, and has since been in use in England. It consists of an upright pole or mast, 50 or 60 feet high, to which are suspended two or more arms or indicators, being hung near the top, and, being moved round by means of ropes, &c., is made to perform a complete revolution; and which, by different angles, make the different positions which indicate numbers, which being adapted to words, sentences, &c., convey the required information. Mr. Dudley, some years since, erected a semaphoric telegraph upon an improved plan, with a view only to accelerate the working the arms, and give accuracy to the positions. He therefore conceived the plan, by applying a chain wheel, of peculiar construction, to the arms, which was connected by a similar wheel below, and worked by cog or spur wheels of required calculation; by which not only complete simplicity was given, but the most perfect accuracy, so that a person of very ordinary capacity can work it with ease and correctness. Mr. Dudley has also another improvement, by having two masts, and three arms affixed to each. As the multiplicity of arms will afford a greater combination of numbers, this will furnish a sufficient number for any purpose, and also form an extensive vocabulary of words, sentences, &c., which can be shown instantly to the eye of the observer. You will perceive here a sketch of the semaphoric telegraph. With these six arms, making only six positions each, the astonishing number of 1,075,689 different changes or combinations are made, no two of which are alike, and each of which is capable of expressing so many words sentences, places, &c., the whole being arbitrary numbers; or, in other words, signals that are made at an instant,



and the whole communication placed before the eye of the next station, so that it can be passed from one to the other as quick as the positions can be made. The first cost or expense of establishing the stations would not, in ordinary situations exceed $300 each. The expense of supporting it would vary according to the location; probably from 300 to 500 dollars per annum. To make a correct estimate as to the probable expense of establishing and supporting telegraphs for any given distance, and for any specified period, cannot be made, as it is impossible to anticipate what difficulties would be encountered by clearing away forests, &c. But upon the principle cited above, the following may be of some service.

The distance from Boston to Washington is, by the most direct mail route, something less than 450 miles, and would require, at the distance of eight miles between the stations, 56 stations; that is, one at each extremity, and 54 intermediate stations; the average cost of each would be $300, amounting to $16,800, telescopes for each station, $30 each—$1,680; preparing a system, with a vocabulary, &c., with sentences adapted to the particular location, say $200.

Total first cost, - - - - -	$18,680
Conductors at Boston, New York, Philadelphia, Baltimore, and Washington; salary, $600 each, - - -	3,000
51 keepers of intermediate stations, $300 each, - - - - -	15,300
	$36,980

To the last requisition, as to the practicability of uniting a system of telegraphs in the night or in fogs: it would be easy to have a system for the night, by using lights or lanterns, by attaching them to the arms of the day telegraph; but during fogs, no system of

cannons could be used, except at great additional expense; for it would be impossible to hear a 12-pounder more than five or six miles, with any degree of certainty, particularly in the city; and there is no other way of communicating during dense fogs, except by sound, and then, unless very near, could not be relied on.

Very respectfully, your obedient servant,

HENRY D. HUNTER,
Capt. U. S. Revenue service.

Hon. LEVI WOODBURY,
Secretary of the Treasury.

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No. 6.

NEW YORK, *April*, 1837.

SIR: I have the honor to acknowledge the receipt of your circular, dated 10th ultimo, in relation to "the propriety of establishing a system of telegraphs for the United States," and asking my opinion thereon.

At this late day, I do not conceive it at all necessary to enter into a detailed account of the rise and progress of the various modes by which communications have been made by certain arbitrary signs or signals, from the earliest times of civilization. I will merely mention that the first successful telegraph that was extensively brought into operation for practical purposes was invented by Monsieur Chappe, an ingeniuos artist, in the year 1793, through which a correspondence was opened between Paris and the French army, then lying at Lisle; since which, various improvements have been made from time to time in this science, by a number of ingenious and enterprising individuals.

It is now about eighteen or twenty years since this subject first drew my attention; and, in 1821, at the solicitation of merchants and underwriters, I erected a set of telegraphs for this harbor, which were much approved and praised at that time; and, subsequently, connected them with the new Exchange. I also wrote and published a small treatise upon "telegraphic signals," which were intended to afford the shipping an easy, concise manner of conversing with the telegraph as soon as they should arrive off the harbor, so that the merchant could literally stand upon the vestibule of the Exchange in Wall street, and commune with the captain of his ship when outside Sandy Hook. This system, however, was never fully completed as originally intended, owing to a difference that arose between the Exchange Company and myself, as to terms; the then leading members of the said company (Messrs. Tibbetts, Wyckoff, and Griswold) being very desirous to avail themselves of my services, without any evident disposition to afford the smallest remuneration; but, on the contrary, the said gentlemen descended to the dishonorable act of employing persons to copy my draughts and models in the most surreptitious manner; and, finally, not being able to succeed, as they expected, they were obliged to have recourse to my original plans, from which my first telegraphs were erected upon Staten Island—the model I had prepared for the Exchange, at their express solicitation, being entirely beyond their comprehension.

A telegraph, sir, to be *perfect*, should possess the power of communicating, *orthographically*, any subject that may be presented, letter for letter, and word for word; and *that*, too, in the most correct and rapid manner. The system which I exhibited in Washington last winter, is the result of much research and a great variety of experiments, after a thorough examination of all that had been done before, and which has been pronounced to be as simple and as perfect in its operations as any telegraphic system known to the present age. My method is predicated upon the principle that every man is, in reality, a representative of a telegraph—he being composed of a perpendicular column, and two lateral moving indicators; and the communicating powers are precisely the method by which the deaf and dumb are taught to read and write.

When in Philadelphia a few days since, I displayed my plans and models to Commodore Barron, at his request, and a number of other officers of high rank in the navy, now upon that station, who signified their entire approbation of my system; and Commodore Barron, who is acknowledged to be the most scientific officer now in the service, was pleased to say that he fully concurred with them in their opinion.

From the various experiments that I have made with my telegraphs in this harbor, when they were in perfect order, and the operators *well* instructed and, with close attention, I find that I could communicate, *orthographically*, about four hundred words per hour, from the first to the second telegraph, without reference to books of any kind; two seconds were then allowed to each telegraph for the transmission of each sign, or ten seconds to every word, taken as the mean time.

A telegraphic stenography is used upon this occasion, which is so very simple, that it may be committed to memory in a few hours' study.

A proper telegraph may be applied to two distinct modes of operating: the first, with *arbitrary* signs or signals, by which reference must be had to certain words or phrases previously arranged, and is sometimes liable to error in taking them out of the books. This mode will answer very well for local purposes, such as now used in the harbor of New York. But the second, *i. e.* the orthographical mode, is the only true system by which communication can be made with perfect dependence and correctness, when extensively required for general correspondence, and, from constant practice and hourly exercise, will be found to be not only more correct than any other method, but even more *rapid*, as this system will be constantly improving itself.

It is indeed, sir, hardly necessary to remark, that this, like most other things in this world, may be very well done, or done very indifferently. But, to my mind, if put in operation at all, it will never give satisfaction to the public, unless conducted with the utmost degree of elegance, excellence, and perfect precision; in short, it must command the entire confidence of the people, or it will inevitably fail.

The cost of erecting a line of telegraphs for any given distance, to be established in the *best possible manner*, including machinery, buildings, sites for locations, telescopes, stoves for winter, stationary, &c., may be safely estimated at $1,000 each.

The annual expense, say from Washington to New York, which is about two hundred and fifty miles, allowing thirty telegraphs, one superintendent, four key operators, and three operators to each of the mutes, as is the case in France, would amount to about $34,000. Deaf and dumb persons might be employed to work the mutes.

It would appear to me that the Post Office is the proper Department to which this establishment should be attached, as it might be conducted as a branch, similar to the "express mail." Each of the principal operators at the key or mail telegraphs should be sworn officers, the same as the several postmasters, as the communications must always be considered as confidential. Every letter, invoice, bill of lading, price current, &c., required to be forwarded, should be handed into "the box office" of the telegraph; and the sum of —— to be paid for every one hundred words, or a given number of figures, so transmitted.

The person who first applies must always have precedence; and the names of all applicants should be registered in successive order, as they may be presented, to avoid all difficulty and confusion. The original documents or communications should be carefully filed and deposited in a private apartment,

to which access must only be had by the principal operator, or person to be employed in that office.

Other regulations of this nature will present themselves in course.

Concerning "night signals," I must take the liberty to refer you, sir, to a very ingenious mode invented by Commodore Barron. I have not seen any experiments made with it, but, as far as I am able to judge from what I saw, I think it admirably calculated for night communications.

The mode which I propose for this operation is, to dress the upright and indicators of my telegraph with a species of argand lamps, which will show the figure and shape of the objects; so that we can telegraph by night, in this way, almost as well as we can in day time.

Rockets and various colored lights may be used beneficially upon extraordinary occasions, by a preconcerted arrangement; also flashes and fuses.

The only "fog signals" that I am acquainted with are commonly represented by a given number of guns, and may be employed in the same manner as rockets.

The points to be selected for locations are, of course, the eminences; and it will sometimes be necessary to wander from the straight line, to obtain the most advantageous elevations. The greatest difficulties to be overcome, in these cases, are from meeting with a thick, heavy growth of woods, where no eminences are to be obtained; in such extremities, when they should occur, a good deal of cutting and trimming would undoubtedly be required, for the purpose of keeping open the vista.

Admitting the foregoing to be substantially correct, we now arrive at the all-important part of this very interesting subject; that is, "the manner, and the various particulars, in which the system may be rendered most useful to the Government of the United States, and the public generally." In my opinion, sir, there is no country where the system of telegraphing can be brought into extensive practice with greater benefits and advantages to the public at large, than in this great, busy, bustling world of our own, and more especially to the *mercantile* class of the community. What *can* be of more essential importance to the citizens, as well as to the Government, of this great and growing western world, than to possess the means of transmitting and receiving intelligence from one end of the Union to the other, and between our atlantic cities and those of the far west, in the space of a few hours!

Letters upon all ordinary business, foreign and domestic, and much of the affairs of Government relating to the different Departments, may be transmitted through this channel with the greatest facility and promptness.

And why not here, as well as in France, where we now see in the daily gazettes the hourly communications between Paris and the extremes of that empire?

In conclusion, sir, I have only to add, that, as far as my intercourse has extended, I find a very great majority in favor of this project—probably nine out of ten. Indeed, it is the wonder of many that this thing has not been carried into effect many years ago.

Should you require any thing further at my hands upon this subject, be assured, sir, that it will afford me great pleasure to comply with your wishes, if within my means.

With very great respect, &c.

SAMUEL C. REID,
of New York.

HON. LEVI WOODBURY.

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No. 7.

HALL OF THE FRANKLIN INSTITUTE,
Philadelphia, April 19, 1837.

SIR: In compliance with instructions from the standing committee of science and arts of the Franklin Institute, I have the honor to send you herewith a copy of a report made to them by a sub-committee, to whom they had referred your circular on the subject of telegraphs. The committee are very conscious that a report prepared with such haste must not only be imperfect, but be liable to errors which a more mature consideration might have removed. They have judged it important, however, that the communication of their general views should be made to you without delay, while they hold themselves still at your command for any further services which you may think proper to ask of them.

I am, sir, with high respect,
Your faithful servant,
R. M. PATTERSON, *Chairman &c.*

Hon. LEVI WOODBURY,
Secretary of the Treasury.

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HALL OF THE FRANKLIN INSTITUTE,
Philadelphia, April 18, 1837.

At a stated meeting of the committee of science and arts, of the Franklin Institute of Pennsylvania, held on the 15th of April, 1837, a circular letter from the Hon. Levi Woodbury, Secretary of the Treasury, was received, proposing inquiries on the subject of a system of telegraphs for the United States:

Whereupon this communication was referred to a sub-committee, consisting of R. M. Patterson, Roswell Park, Henry J. Rogers, Charles B. Trego, and Sears C. Walker.

At a special meeting of the committee of science and arts, held on the 18th of April, 1837, the above sub-committee presented the following report: whereupon it was—

Resolved, That this report be adopted, and that the chairman of the committee be instructed to communicate a copy thereof to the Secretary of the Treasury.

R. M. PATTERSON,
Chairman of the Committee of Science and Arts, &c.

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Report of Sub-Committee.

The sub-committee, to whom was referred the communication of the Secretary of the Treasury on the subject of Telegraphs, think it would be premature, if not impracticable, to enter, at present, into minute details as to the matter referred to them, and judge that the institute would fulfil the wishes of the Secretary more effectually by making to him an early communication of their general views, and leaving to a future correspondence any further developments that may be required of them. It is under this impression that your sub-committee have hastened to prepare the following report:

1, *Kind of Telegraphs.*

The ample details given in Rees's Cyclopædia, and other works, as to the different schemes employed or proposed for telegraphs, render a description by the committee unnecessary. Only one of these telegraphs seems to have stood the test of long experience; it is that invented by Chappe, and employed in France since the year 1793. It is composed of three arms; one about eight feet long, moveable around its middle point; and two of half the length, attached by their ends to the ends of the first, and also moveable; the movements being communicated from within the building, by cords and pullies. This telegraph is capable of giving 100 distinct signals. It is believed, however, to be unnecessarily complicated, and has the disadvantage of not being suited for night signals.

Your sub-committee are, therefore, disposed to recommend a muchmore simple instrument, nearly similar to one lately introduced by M. Chateau, in a line of telegraphs which the Russian Government is erecting between Petersburg and Warsaw, and which is described in a late number of the Petersburg

Transactions, by M. Parrot, together with a scheme of his own, almost identical with it, on which he had made successful experiments many years before.

This proposed telegraph consists of a single arm, or *indicator*, which should be about nine feet long and one foot wide, with a cross-piece at one end, about three feet long and one wide; the whole arm being moveable about an axis at its centre. The arms are formed like Venetian shutters, and are painted a dead black; the apparatus and fixtures about it being white.

The movements may be communicated with ease and certainty, either by an endless chain passing over a wheel on the axis, and a wheel in the building; or by bevel wheels on the axis, and on a vertical bar passing from the building, or by a cog-wheel on the axis, and an endless screw on a vertical bar.

For night signals, three lamps are used; one swinging beyond the end of the arm; the other two beyond the ends of the cross-pieces.

2. *The signals.*

The signals are given by the different positions of the arm of the telegraph. M. Chateau used only eight, but M. Parrot, by experiments, in which the Emperor Alexander was an observer, demonstrated that twelve positions, distant 30° apart, could be readily distinguished. By an appendage (which will be proposed) to the telescope, all doubt on this subject will be removed.

Now it is believed that twelve fixed signals, together with those which may be given by certain motions of the arm, are abundantly sufficient for all telegraphic communications, whether alphabetical or numerical.

For this purpose let the twelve different positions represent the following numbers and letters:

1	2	3	4	5	6	7	8	9	10	11	12
a	*b*	*c*	*d*	*e*	*f*	*g*	*i*	*l*	*m*	*o*	*s*
	p	*k*	*t*		*v*	*j*	*y*	*r*	*n*	*u*	*x*
	ph	*q*	*th*		*w*						*z*
		ch			*wh*						*sh*

The *h*, being only an aspirate, is omitted.

To indicate the separation of words, the arm may be vibrated twice, namely, one space (30°) to the right and one to the left of the signal, and then carried to the first letter of the following word. To repeat a letter, the arm may be turned a space to the right, and then immediately brought back to the first position. To indicate that signals of numbers are to be given, the arm may be turned to the right entirely round, and as much farther as may be necessary to carry it to the position 10, which is the 0 of numerical signals. To separate numbers, the same sign may be used as for separating words. To indicate that the signals of numbers are completed, the arm may be made to revolve entirely round to the left. When a wrong signal is given, the fact may be indicated by moving the arm backward and forward once, a distance of 90°, &c.

Suppose, now, the following signals to be seen and noted down:

4, 5—5, 10, 10, 5, 10, 8—1, 12—9, 1, 10, 4, 5, 4—1, 4—2, 1, 9, 4, 8, 10, 11, 9, 5—6, 8, 4—317,000c 10, 5, 10.

Taking the upper letters of the key, the despatch would be as follows:

De emmemi as lamded at Baldimole, fid 17,000 mem;

Of which the true reading may be seen, even without the further aid of the key, to be this:

The enemy has landed at Baltimore with 17,000 men.

To prevent the discovery of the key, it may, when secrecy is important, be changed from time to time, without difficulty or inconvenience, since it is only at the extreme stations that it need be known.

If the system of signals, by a telegraphic vocabulary, be found most desirable, it will only be necessary to use the telegraph to indicate the numbers corresponding to the words in the vocabulary. In this way, if the ordinary decimal notation be employed, 999 words may be indicated without any one requiring more than three signals, and 9,999 without more than four. But if the duodecimal notation be used, 1,463 words may be indicated without exceeding three signals for each, and 16,104 without exceeding four.

3. *The telescopes.*

For the telescopes to be used, M. Parrot recommends an acromatic object-glass of 3 inches diameter and 3 feet focal distance, and a double concave eye-glass of an inch and a half focal distance. This is, in fact, a Galilean telescope, of the simplest construction, and will have a magnifying power of 30. The inconvenience of a very small field of view is of no consequence in this case; and the propriety of giving an erect image, with but two glasses, is perhaps of some importance.

Still the sub-committee are disposed to give the preference to the common astronomical telescope, which has only the inconvenience (if it be one) of inverting the image, and which allows the use of an appendage deemed to be of some importance. This is a set of cross-hairs placed at the focus of the eye-glass, to correspond with the twelve positions of the arm of the Telegraph, and thus point them out without the possibility of mistake. The true numbers, corresponding to the positions as seen in the telescope, may be marked on a diagram placed before the observer; so that, in calling them out, he will not be exposed to any mistake in consequence of the inversion of the image by the telescope, or by the back and front view of the telegraph.

The telescope, being fixed in its position, will be, of course, without the ordinary arrangements for motion. It should be placed entirely within the building; its object end being inserted into a hollow cylinder of wood passing through the wall, and painted black on the inside, so that all stray light may be kept from entering into the telescope, and distracting the view of the observer.

It is scarcely necessary to add that there must be two telescopes at each station.

4. *Distance of telegraphs.*

The mean distance of the French telegraphs is two leagues, or six miles. In the experiments made by Parrot, and in which the image was very distinct, the distance was ten wersts, or about 7 1-2 miles. The distance must be, in some measure, determined by the suitableness of the stations in other respects; but the maximum should not probably exceed 7 1-2 miles, or the mean, 6.

In selecting the stations, care must be taken that there be no considerable deviation from the front view of the telegraph on either side; and that it may be seen, from the adjacent stations, projecting against the sky.

5. *The time of signals.*

In the French telegraph, the time required for each signal is estimated at 20 seconds; but it is believed that the simple signals of the proposed telegraph can be made and repeated much more rapidly; each signal in the former requiring three movements, in the latter only one. Far greater attention, moreover, is necessary in the French telegrnph, to see what is the true signal made, and this, also, requires time.

M. Parrot, from his experiments, estimates that it will require three seconds to see with certainty and dictate a signal made; three seconds to repeat it, and three to remain till it be repeated at the next station: in all, nine seconds—say ten—for each signal.

A line of telegraphs from New York to Washington would require about 40 stations; hence a signal made at New York would be repeated at Washington at the end of 400 seconds, or 6 2-3 minutes. A

despatch of 100 signals would require 1,000 seconds, or 16 2-3 minutes at the first telegraph, and would be communicated to the last at the end of 1,400 seconds, or 23 1-2 minutes.

6. *Telegraph buildings.*

On the line of telegraphs the buildings may be of wood, about 22 feet square, two stories high, and with a roof in the form of a quadrangular pyramid, surmounted by a small platform. In such a building it is judged that the arrangements for the telegraph, and for the necessary accommodation of the operators may be made. In the cities, the telegraph must be placed on the top of some suitable building of considerable height.

7. *Men and officers.*

In urgent cases, three persons ought to be employed at each telegraph while it is in operation: one at each telescope, and one to make the signals. The observers may easily record the signals as they see them, if, indeed, this be necessary. In ordinary cases, two operators, or even one, will be sufficient; but as a lookout should be kept constantly, both day and night, less than three persons ought not to be employed at each station.

At each *principal* station there should be a secretary. Every ten stations should have a superintendent; and, if the system be considerably extended, there should be a director-general to take charge of the whole business, with book-keepers and clerks to assist him.

8. *Estimate of cost.*

Although the committee cannot pretend to accuracy in their estimates of the cost of establishing and maintaining a line of telegraphs, they have thought that even an imperfect approximation might be deemed of some interest and importance, and they have accordingly prepared the following:

At each station on the line.

Cost of ground for the building and enclosures,	$100	
building,	1,000	
necessary furniture,	200	
well and pump,	100	
		$1,400
telegraph and fixtures,	300	
two telescopes,	100	
clock,	20	
transportation and puting up,	80	
		500
contingencies,		100
Total *first cost*,		2,000

Annual expenses of each station on the line.

Salaries of the operators, which may be a man and his family,	1,000	
Fuel,	50	
Oil,	50	
Contingencies and repairs,	200	
		1,300

Annual expenses for officers, &c.

Salary of director-genenal,		2,500
each superintendent,	1,000	
horse and travelling expenses, extra,	300	
		1,300
Secretary at principal station,		1,000
		4,800

Estimate for a line from New York to Washington.

36 telegraphs, at $2,000 each,	72,000	
4 city telegraphs, at $5,000,	20,000	
		92,000
Contingencies, and general superintendence of erections,		8,000
Total prime cost,		100,000
Annual charges of 40 telegraphs, at $1,300 each,		52,000
Five superintendents, viz: two between New York and Philadelphia; two between Philadelphia and Baltimore; one between Baltimore and Washington,		6,500
Four secretaries at the four cities,		4,000
Total annual cost,		62,500

9. *Selection of lines of telegraph.*

The lines of most obvious necessity are those from the bays, along the rivers, to the great cities. As a general line, one from New York to Washington would be of great interest and importance. If found successful, lines might be afterwards extended to other great points.

For the location of the stations, it would seem particularly suitable to employ the services of the corps of topographical engineers.

10. *Experimental telegraphs.*

In conclusion, the sub-committee would recommend that it be respectfully suggested to the Secretary of the Treasury to consider the propriety of causing two telegraphs to be erected, in which careful experiments may be made on all points that bear upon the general question submitted to him by the House of Representatives; and that the services of the committee, in erecting the telegraphs and conducting the experiments, be offered to him, should he think proper, and feel himself authorized to act upon this suggestion.

Submitted to the committee of science and arts, April 18th, 1837.

R. M. PATTERSON,
ROSWELL PARK,
CHAS. B. TREGO,
SEARS C. WALKER,
Sub-Committee.

No. 9.

NEW ORLEANS, *April* 28, 1837.

SIR: In conformity to the circular of the 10th March last, I have the honor to inform the President of the United States, that when telegraphs were placed in Italy, during last war, I then acquired some knowledge of them, which may, perhaps, be of some use for the information desired.

Telegraphs invention is in part due to some men who framed and brought into effect a plan of cheating lotteries, as according to its history, which I briefly state.

It will be first understood that, in Italy, the Government has always been the manager of lotteries and the arrangement of the lotteries. Tickets have been as follows, viz: any individual may lay upon 3, 4, or 5 numbers of his choice any sum of money he may choose, and wins therefore proportionally with the money laid upon them.

There was then an arrangement made between the city of Rome and Milan, that tickets of the lottery of Milan were sold in Rome, and so in Milan the tickets of Rome, &c. It has been custom in these two cities to draw lottery about sunset; and it was custom, also, that when the lottery drew in Milan, those in Rome did continue to sell tickets of the lottery had drawn in Milan, for the length of 12 hours after the drawing of the lottery; and so they practised in Milan, when the lottery drew in Rome, &c.; so that certain individuals invented a peculiar telegraph, which, in about an hour, gave communication in Rome of the numbers drawn in Milan; that they being aware

with the numbers drawn, they immediately go to the lottery office, and laid upon the numbers already drawn any sum of money they chose. They did go on so for some time; they did make a large sum of money but at last their telegraph was found out. They were cited and tried in court, where this invention was distinctly stated, &c.

Answer to the requisites of the mentioned circular.—Telegraphs in operation at this day in Italy are of different systems. There are some on the seacoast, located upon light-houses, and run one hundred miles in about 11 minutes, more or less, according to the communication. Upon land and mountains they work on another system, and run still quicker.

Telegraphs give communication as well in daytime as in the night, when properly arranged.

Telegraphs, in foggy weather, cannot give communication by cannon, for the report of the cannon depends on the wind.

When the telegraphs are placed upon high hills or mountains, cannot experience much fog.

Rockets cannot advantageously answer for telegraphs, for rockets can be noted but a few miles distant.

Systems of telegraphs are generally arranged to suit their locality. System of communication is easy and simple, for it is but a collection of some peculiar marks and signs, which secretly have their significations; but with respect to proper points for location and distance for the station of each other, it is a matter of a deep consideration and a long labor to be there properly arranged. If my time should not be as taken up as it is, then I would give my views, probably unworthy, on telegraphs; so that it would be rather unwise to neglect my profitable time for an affair of which I have not any title.

I am, sir, very respectfully,
Your most obedient servant,
S. PENISTRI.

To his excellency M. VAN BUREN,
President of the United States.

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No. 17.

UNIVERSITY OF THE CITY OF NEW YORK,
November 28, 1837.

MY DEAR SIR: In my letter to you, in answer to the circular respecting telegraphs, which you did me the honor to send me, I promised to advise you of the result of some experiments about to be tried with my electro-magnetic telegraph. I informed you that I had succeeded in marking permanently and intelligibly at the distance of *half a mile.*

Professor Gale, of our university, and Mr. Alfred Vail, of the Speedwell iron-works, near Morristown, New Jersey, are now associated with me in the scientific and mechanical parts of the invention. We have procured several miles of wire, and I am happy to announce to you that our success has, thus far, been complete. At a distance of *five miles*, with a common Cruikshank's battery of 87 plates, (4 by 3 1-2 inches each plate,) the marking was as perfect on the register as in the first instance of half a mile. We have recently added *five miles more*, making, in all, *ten miles*, with the *same result*; and we have now no doubt of its effecting a *similar result* at *any distance.*

I also stated to you, sir, that machinery was in progress of making, with which, as soon as it should be completed, I intended to proceed to Washington, to exhibit the powers of the invention before you and other members of the Government. I had hoped to be in Washington before the session of Congress, but I find that the execution of new machinery is so uncertain in its time of completion that I shall be delayed, probably, until the beginning of the year.

What I wish to learn from you, sir, is, "*How late in the session can I delay my visit, and yet be in season to meet the subject of telegraphs, when it shall be presented by your report to Congress.*"

I am anxious, of course, to show as perfect an instrument as possible, and would wish as much time, for the purpose of perfecting it, as can be allowed without detriment to my interests as an applicant for the attention of Government to the best plan of a telegraph.

I am, my dear sir, with the greatest respect and personal esteem,
Your most obedient servant,
SAML. F. B. MORSE.

Hon. LEVI WOODBURY,
Secretary of the Treasury.

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No 10.

TELEGRAPH OFFICE OBSERVATORY,
Boston, September 1, 1837.

By a resolution of the House of Representatives at their last session, you were requested to report at the next session upon the propriety of establishing a system of telegraphs for the United States. As the success of my application to Congress must depend upon the nature of that report, I take the liberty to communicate to you such statements and suggestions, showing the importance and practicability of the proposed medium of certain and swift intelligence, as, I venture to hope, may assist you in making the required report to Congress.

Your circular to the collectors of the customs, commanders of revenue cutters, &c., will undoubtedly elicit much valuable information touching the several inquiries made in the circular. The success of the semaphoric system of telegraphic operations by land is now so well established, that its entire practicability cannot be called in question.

The Postmaster General has given very favorable consideration to my proposed plan of extending this system, under the patronage of the United States, in a manner that cannot fail to be attended with highly beneficial results. I believe it may be employed effectually as a substitute for the express mail, and with vastly greater expedition. Such an establishment of speedy communication along the line of our coast would be an improvement worthy the character and enterprise of this nation; and it would give me great pleasure to be enabled to carry it into effect under your governable auspices. With this view, I proceed to communicate some of the practical details of the system, which I trust will commend it to your approval, and, through you, to the Congress of the United States.

With high respect,
Your most obedient,
JOHN R. PARKER.

Hon. LEVI WOODBURY,
Secretary of the Treasury, Washington

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The Semphoric Telegraph.

In the infancy of the telegraph science, the process of communication was effected by spelling the words, each sign denoting a letter of the alphabet; but modern ingenuity has introduced dictionaries, by which words, phrases, and sentences can be communicated at once, by being arranged alphabetically, and having opposite to each word, phrase, or sentence, a corresponding numeral affixed thereto. The semaphoric telegraph is very simple in its construction and movements, as well as being economical in its cost: it consists of an upright post or mast fifty to sixty feet in height, having two moveable arms, composed of boards, six to ten feet in length, and one to one and a half in breadth—one of them hung one-third from the top, the other one-third from the bottom, by one end on a pivot, in such a manner, that when the boards are at rest they hang against the mast, so as not to be seen at a distance, but, when pulled out on either side by chains attached tothem, they can be seen by glasses from either of

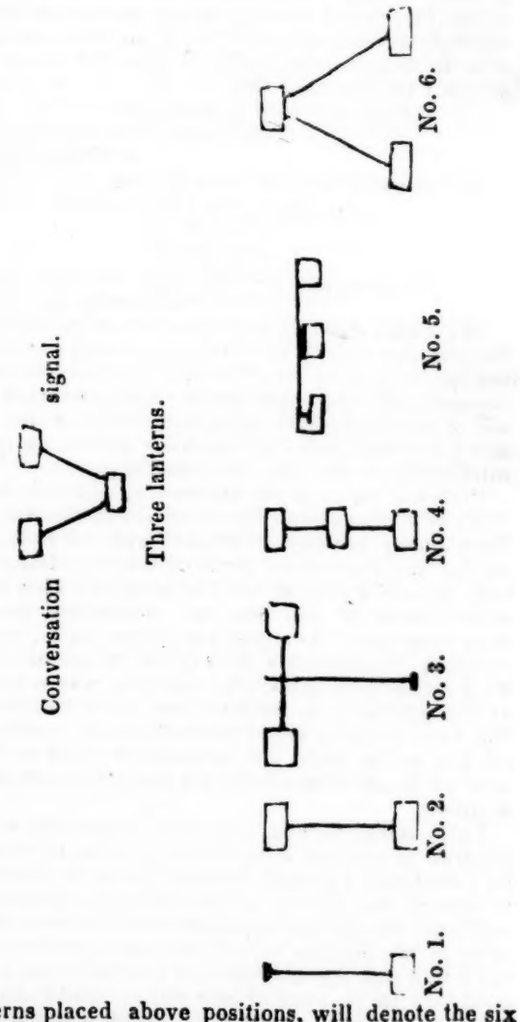
the stations between which they are located, from ten to twelve miles, according to their situation. Above the two arms, or boards, at the top of the mast, is a smaller arm, called the indicator; each of the arms revolves into,and is made to rest in six positions, three on each side of the post, at the points which would designate respectively the several numerals from one to six; so that the three arms can take eighteen positions, and, by the principle of permutation, express any number, from a unit to many hundreds of thousands. With the semaphoric telegraph, a dictionary, or telegraph vocabulary, containing sets of numerals placed in alphabetical order, with words, phrases, and sentences, exactly upon the principle of a dictionary of any language. The telegraph dictionary differs only from any other in having a series of numerals, instead of a series of words or letters under each letter of the alphabet, with the meaning of the numbers affixed to them; just as in a French dictionary, for example, the French word would be put first, and then the English meaning by its side. The arms of the telegraph being placed in certain positions, denote particular numbers; the observer, then, seeing the positions of the arms, looks into his telegraph dictionary for the numbers denoted by them, and by the side of that number he finds the word signified by it. This is a general view of the principle of the invention. This numerical dictionary or telegraph vocabulary embraces, as far as can be anticipated by experience, all the questions and answers which are likely to occur upon all and every subject. It also contains a list of numerals designating the names of vessels, principal countries, ports, places, towns, cities, headlands, capes, harbors, besides a list of *seventeen hundred sail of vessels* which have adopted the semaphoric system of telegraph communication, together with all the public vessels of war and revenue cutters belonging to the United States of America, whose names are designated by a particular numeral; which saves the trouble of spelling the name letter by letter, as must be in the case of all those vessels which have not adopted the semaphoric system.

The semaphoric signal-book embraces three parts. The first part is familiarly known by the name of *the marine telegraph;* when this is used, it is designated with the indicator, by the numbers denoting 6—4, which may be termed the numeral name of that part of the book. A brief exemplification will make this intelligible. When the observer at one station wishes to comunicate with the other, he places the indicator in a perpendicular position, in which it is kept during the whole time of the communication, except when changed to designate one of the books, as explained hereafter. Let it be supposed that the conductor of one of the stations should wish to converse or inquire of the other whether he had any thing to communicate. This question will be found in the first part. Now, before asking the question, the observer puts the indicator first in position 6, and then changes it immediately into position 4, which is noted down upon a slate, or paper, thus: 6—4. The person inquired of then knows he is to look into that book for the matter in question. The first observer then has recourse to the two arms of his telegraph, with which he makes the signal denoting the numerals 4—3—2—4; thus making the entire number 4324; against which number in the book, the person at the other station finds this question: "*Have you any thing to communicate?*" Being thus possessed of the question, he prepares to answer it, either *yes* or *no*, which is to be found in the same part of the book. He also, in the first place, by means of his indicator, gives the numbers 6—4, to denote that book, and then immediately answers by the sign for number 4, which means *yes*, or by number 1, which means *no*.

The second part is a very copious appendix by the undersigned, who,in order to extend its utility, has added in a distinct column the numerals, phrases, &c. of the Holyhead telegraph establishment at Liverpool, in England. which is of much importance to the interests of British and American commerce. This second part is designated also by the indicator, not by any one fixed and invariable number, but by several different combinations of numbers, each of which at once directs the observer to a particular subdivision or letter of the alphabet, where will be found the principal or important word of the sentence. For instance: Suppose the indicator should give the numbers 1—5; now, as this number does not denote the first part, or marine telegraph, which is 6—4, nor the Boston harbor signal-book, which is 6—5, (as explained hereafter,) it follows that the observer is to look into *Parker's Appendix*, or telegraph vocabulary, so called. In this, it will be accordingly found that the numbers 1—5 denote the subdivision or letter D, under which the principal word or subject-matter of inquiry will be seen. After this, if the following numbers, for example, should be given by the arm of the telegraph, 2—6—4, "*is in great distress, and requires immediate assistance,*" will be indicated.

The harbor signal-book, or third part, is designated by numerals 6—5 by the indicator. Each of the three books having its appropriate name in figures, no confusion can possibly occur as to the particular one to which the observer is to refer.

For the purpose of extending the operations of the semaphoric land telegraph, and for the purpose of transmitting intelligence *by night as well as by day*, the following arrangement has been adopted in conformity to the established system of the semaphoric communications:



Lanterns placed above positions, will denote the six numerals required.

A distance of three to six miles, it is presumed, would render the indications sufficiently distinct in clear weather. It is advisable, in selecting locations

for telegraph purposes, that they should be so situated as to afford *a back horizon*; without which, your distance between the stations must be considerably shortened. An extent of eight to ten miles may be made to answer any purposes where the stations are elevated, and furnish the above-named requisite for daylight operations. But where a location does not afford *a back horizon*, five or six miles is the extent of distance in such instances.

In regard to the expense of erecting and supporting telegraph stations, situations comprising sites where there is a light-house may be computed at a much less rate per annum than stations situated in the interior of the country. The cost of the machine for telegraph operations cannot exceed *three hundred dollars* for the mast, boards, rigging, and machinery, including a house-covering for the conductor. The salary for each conductor may be computed at *three hundred dollars per annum*; and in regard to the expense of location, this item must depend upon a contingency which cannot be made a subject-matter of calculation. Should the premises occupied be in possession of the Government, the annual rent of ground would be comparatively trifling; yet instances may occur where a heavy rent might be demanded; consequently, no certain or absolute calculation can be made until the locations are ascertained, together with many other circumstances which might or might not be brought into view in estimating this particular item.

An essential and highly important auxiliary improvement has, of late, been effected, by means of flags, called *the marine telegraph:* their use rests upon the same principle with the arms of the semaphoric land telegraph; they are six in number only, and correspond to the six positions of the arms of the land telegraph, denoting the numerals 1, 2, 3, 4, 5, 6; they are each blue and white, and all of the same size, with duplicate numbers to each flag. To these is added a conversation flag, which, like the indicator of the land telegraph, shows that the vessel making the signal wishes to converse. Nearly ten thousand changes and combinations can be made, designating the words. phrases, and sentences in the books above named. By such means, vessels at sea can communicate to each other, even at the distance of ten miles; and when they approach the coast, can hold communication with the semaphoric land telegraph.

From the aforegoing illustrations, exhibiting the uses and extreme facility of communicating by telegraph, some opinion may be formed of its vast importance to a great commercial country, possessed of such an extensive sea-coast as the United States of America, having a constant intercourse, not only among themselves, but with the whole commercial world; and in the event of a war, its benefits would be incalculable, when rapid communication of intelligence might be of vital importance to the whole population of a town, city, or even of the country at large; but, in ordinary times of peace, and in the usual course of commercial business, when we consider its utility in the preservation of property, and, above all, the lives of our seafaring brethren, we cannot sufficiently appreciate the value of the invention.

The very extended and increasing commerce of the United States, in continual intercourse with each other as well as the whole commercial world, should possess every facility of communication that can be devised, for the purpose of diffusing information and promoting the safety and comfort of those engaged in carrying it on. With such views, and to enable vessels at sea to communicate with each other, and to the shore on approaching it, the undersigned has devoted a portion of his labors, in order that merchants, shipowners, underwriters, and all others engaged in commercial and mercantile pursuits, may not only obtain information of their vessels, but be made acquainted with every circumstance relating to them when at sea, on their arrival and departure, as well as their protracted stay in port, while winds and weather may make other intercourse difficult, and oftentimes impossible. By the promotion and adoption of the marine telegraph system of signals, a universal language is established for conversation on the ocean. It is, therefore, not only in a *commercial* or *mercantile*, but *national* point of view, that they should be regarded.

JOHN R. PARKER.

BOSTON, *September* 1, 1837.

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No. 15.

NEW YORK CITY UNIVERSITY,
September 27, 1837.

DEAR SIR: In reply to the inquiries which you have done me the honor to make, in asking my opinion "of the propriety of establishing a system of telegraphs for the United States," I would say, in regard to the general question, that I believe there can scarcely be two opinions, in such a community as ours, in regard to the advantage which would result, both to the Government and the public generally, from the establishment of a system of communication by which the most speedy intercourse may be had between the most distant parts of the country. The *mail system*, it seems to me, is founded on the universally admitted principle, that the greater the speed with which intelligence can be transmitted from point to point, the greater is the benefit derived to the whole community. The only question that remains, therefore, is, what system is best calculated, from its completeness and cheapness, to effect this desirable end?

With regard to telegraphs constructed on the ordinary principles, however perfected within the limits in which they are necessarily confined, the most perfect of them are liable to one insurmountable objection—*they are useless the greater part of the time.* In foggy weather, and ordinarily during the night, no intelligence can be transmitted. Even when they can transmit, much time is consumed in communicating but little, and that little not always precise.

Having invented an entirely new mode of telegraphic communication, which, so far as experiments have yet been made with it, promises results of almost marvellous character, I beg leave to present to the Department a brief account of its chief characteristics.

About five years ago, on my voyage home from Europe, the electrical experiment of Franklin, upon a wire some four miles in length, was casually recalled to my mind in a conversation with one of the passengers, in which experiment it was ascertained that the electricity travelled through the whole circuit in a time not appreciable, but apparently instantaneous. *It immediately occurred to me, that if the presence of electricity could be made* VISIBLE *in any desired part of this circuit, it would not be difficult to construct a* SYSTEM OF SIGNS *by which intelligence could be instantaneously transmitted.* The thought, thus conceived, took strong hold of my mind in the leisure which the voyage afforded, and I planned a system of signs, and an apparatus to carry it into effect. I cast a specimen of type, which I had devised for this purpose, the first week after my arrival home; and although the rest of the machinery was planned, yet, from the pressure of unavoidable duties, I was compelled to postpone my experiments, and was not able to test the whole plan until within a few weeks. The result has realized my most sanguine expectations.

As I have contracted to have a complete apparatus made to demonstrate at Washington by the 1st of January, 1838, the practicability and superiority of my mode of telegraphic communication by means of electro-magnetism, (an apparatus which I hope to have the pleasure of exhibiting to you,) I will confine myself in this communication to a statement of its peculiar advantages.

First. The *fullest and most precise information* can be almost instantaneously transmitted between any two or more points, between which a wire conductor is laid: that is to say, no other time is consumed than is necessary to write the intelligence to be conveyed

and to convert the words into the telegraphic numbers. The numbers are then transmitted nearly instantaneously, (or, if I have been rightly informed in regard to some recent experiments in the velocity of electricity. *two hundred thousand times more rapidly than light!*) to any distance, where the numbers are immediately recognised, and reconverted into the words of the intelligence.

Second. The same full intelligence can be communicated *at any moment, irrespective of the time of day or night, or state of the weather.* This single point establishes its superiority to all other modes of telegraphic communication now known.

Third. The whole apparatus will occupy but *little* space, (scarcely six cubic feet, probably not more than four;) and it may, therefore, be placed, without inconvenience, in any house.

Fourth. The *record of intelligence is made in a permanent manner, and in such a form* that it can be at once bound up in *volumes* convenient for reference, if desired.

Fifth. Communications are secret to all but the persons for whom they are intended.

These are the chief advantages of the electro-magnetic telegraph over other kinds of telegraphs, and which must give it the preference, provided the expense and other circumstances are reasonably favorable.

The newness of the whole plan makes it not so easy to estimate the expense, but an *approach* to a correct estimate can be made.

The principal expense will be the first cost of the wire or metallic conductors, (consisting of four lengths,) and the securing them against injury. The cost of a single copper wire 1-16 of an inch in diameter, (and it should not be of less dimensions,) for 400 miles, was recently estimated in Scotland to be about £1,000 sterling, including the solderings of the wire together; that is, about $6 per mile for one wire, or $24 per mile for the four wires. I have recently contracted for twenty miles of copper wire, No. 18, at 40 cents per pound. Each pound, it is estimated, contains 93 feet, which gives a result coinciding with the Scotch estimate, if $1 60 per mile be added for solderings.

The preparations of the wire for being laid, (if in the ground,) comprehends the *clothing of the wires* with an insulating or non-conducting substance; the *encasing them in wood, clay, stone, iron,* or *other metal;* and the *trenching* of the earth to receive them. In this part of the business I have no experience to guide me, the whole being altogether new. I can, therefore, only make at present a rough estimate. Iron tubes enclosing the wires, and filled in with pitch and resin, would probably be the most eligible mode of securing the conductors from injury, while, at the same time, it would be the most costly. Iron tubes of 1 1-2 inch diameter, I learn, can be obtained at Baltimore, at 28 cents per foot. The *trenching* will not be more than 3 cents for 2 feet, or about $75 per mile. This estimate is for a trench 3 feet deep and 1 1-2 foot wide. There is no *grading*; the trench may follow the track of any road, over the highest hills or lowest valleys. Across rivers, with bridges, the circuit may easily be carried, enclosed beneath the bridge. Where the stream is wide, and no bridge, the circuit, enclosed in lead, may be sunk to the bottom.

If the circuit is laid through the air, the first cost would doubtless be much lessened. This plan of making the circuit has some advantages, but there are also some disadvantages: the chief of which latter is, that, being always in sight, the temptation to injure the circuit to mischievously disposed persons, is greater than if it were buried out of sight beneath their feet. As an offset, however, to this, an injury to the circuit is more easily detected. With regard to danger from wantonness, it may be sufficient to say, that the same objection was originally made in the several cases, successively, of water-pipes, gas-pipes, and railroads; and yet we do not hear of wantonness injuring any of these. Stout spars, of some thirty feet in height, well planted in the ground, and placed about 350 feet apart, would, in this case, be required, along the tops of which the circuit might be stretched. Fifteen such spars would be wanted to a mile. This mode would be as cheap, probably, as any other, unless the laying of the circuit in water should be found to be most eligible. A series of experiments, to ascertain the practicability of this mode, I am about to commence with Professor Gale, of our university, a gentleman of great science, and to whose assistance, in many of my late experiments, I am greatly indebted. We are preparing a circuit of twenty miles. The result of our experiments I will have the honor of reporting to you.

The other machinery, consisting of the apparatus for transmitting and receiving the intelligence, can be made at a very trifling cost. The only parts of the apparatus that waste or consume materials, are the batteries, which consume *acid* and *zinc*, and the register, which consumes *paper* for recording, and *pencils* or *ink* for marking.

The cost of *printing*, in the first instance, *of a telegraphic dictionary*, should perhaps also be taken into the account, as each officer of the Government, as well as many others, would require a copy, should this mode of telegraphic communication go into effect. This dictionary would contain a full vocabulary of all the words in common use in the English language, with the numbers regularly affixed to each word.

The stations in the case of this telegraph may be as numerous as are desired; the only additional expense for that purpose being the adding of the transmitting and receiving apparatus to each station.

The cost of supporting a system of telegraphs on this plan, (when a circuit is once established,) would in my opinion, be much less than on the common plans; yet, for want of experience in this mode, I would not affirm it positively.

As to "the propriety of connecting the system of telegraphs with any existing department of Governmenitt," would seem most natural to connect a telegraphic system with the Post Office department; for, although it does not carry a mail, yet it is another mode of accomplishing the principal object for which the mail is established, to wit: the rapid and regular transmission of intelligence. If my system of telegraphs should be established, it is evident that the telegraph would have but little rest day or night. The advantage of commmunicating intelligence instantaneously in hundreds of instances of daily occurrence, would warrant such a rate of *postage*, (if it may be so called,) as would amply defray all expenses of the first cost of establishing the system, and of guarding it, and keeping it in repair.

As every word is numbered, an obvious mode of rating might be, a *charge of a certain amount on so many numbers.* I presume that five words can certainly be transmitted in a minute; for, with the imperfect machinery I now use, I have recorded at that rate, at the distance of half a mile.

In conclusion I would say, that if the perfecting of this new system of telegraphs (which may justly be called the American telegraph, since I can establish my claims to priority in the invention,) shall be thought of public utility, and worthy the attention of Government, I shall be ready to make any sacrifice of personal service and of time to aid in its accomplishment.

In the mean time I remain, sir, with sincere respect and high personal esteem,

Your most obedient humble servant,

SAML. F. B. MORSE.

Hon. LEVI WOODBURY,
Secretary of the Treasury.

From the New York Journal of Commerce.

We have received the following note and dia-

gram, with the explanation of the latter, from Mr. Morse.

To the Editors of the Journal of Commerce:

GENTLEMEN: You had the kindness to assert, a few days ago, my claim to the invention of the *electro-magnetic telegraph*, for which I thank you. As to the priority of my invention, entirely planned, and, for the most part, executed as it was nearly five years ago, I can adduce the amplest proof.

You announced that I was preparing a short *circuit*, to show to my friends the operation of the telegraph. This circuit I have completed, of the length of 1,700 feet, or about one-third of a mile; and on Saturday, the 2d instant, in presence of Professors Gale and Torrey, of this city, and Professor Daubeny, of the Oxford (English) University, and several other gentlemen, I tried a preliminary experiment with the register. It recorded the intelligence sufficiently perfect to establish the practicability of the plan, and the superior simplicity of my mode of communication, over any of those proposed by the professors in Europe.

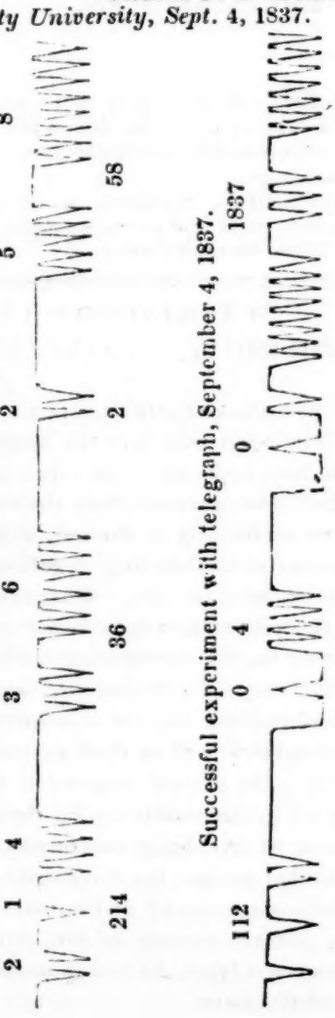
It will be observed that no account has reached us that any of the foreign proposed electric telegraphs have as yet succeeded in transmitting intelligible communications; but it is merely asserted of the most advanced experiment, (the one in London,) that "by means of five wires," &c., intelligence "*May be* conveyed." I have the gratification of sending you a specimen of the writing of my telegraph, the actual transmission of a communication made this morning, in a more complete manner than on Saturday, and through the distance of one third of a mile.

Thinking it may be gratifying to your readers to see the kind of writing it performs, I have had it engraved for you accompanied with an explanation.

SAML. F. B. MORSE.

New York City University, Sept. 4, 1837.

Specimen of telegraphic writing made by means of electricity at the distance of one-third of a mile.



The *words* in the diagram were the intelligence transmitted.

The *numbers* (in this instance arbitrary) are the numbers of the words in a telegraphic dictionary.

The *points* are the markings of the register, each point being marked every time the electric fluid passes.

The register marks but one kind of mark, to wit, (V.) This can be varied two ways. By intervals, thus, (V VV VVV) signifying one, two, three, &c., and by reversing, thus. (Λ). Examples of both these varieties are seen in the diagram.

The single numbers are separated by *short*, and the whole numbers by *long intervals*.

To illustrate by the diagram: the word "successful" is first found in the dictionary, and its telegraphic number, 214, is set up in a species of type prepared for the purpose, and so of the other words. The type then operate upon the machinery, and serve to regulate the times and intervals of the passage of electricity. Each passage of the fluid causes a pencil at the extremity of the wire to mark the points as in the diagram.

To read the marks, count the points at the bottom of each line. It will be perceived that two points come first, separated by a *short* interval from the next point. Set 2 beneath it. Then comes one point, likewise separated by a *short* interval. Set 1 beneath it. Then come four points. Set 4 beneath them. But the interval in this case is a *long* interval; consequently, the three numbers comprise the whole number, 214.

So proceed with the rest until the numbers are all set down. Then, by referring to the telegraphic dictionary, the words corresponding to the numbers are found, and the communication read. Thus it will be seen that, by means of the changes upon *ten* characters, all words can be transmitted. But there are *two points* reversed in the lower line. These are the *eleventh* character, placed before a number, to signify that it is to be read as a *number*, and not as the representative of a word.

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No. 18.

A brief explanation of the advantages offered by the system of universal and perpetual telegraphs: the invention of Messrs. Servel and Gonon.

Without entering into a detailed statement of the systems which have been in use, or, to speak more correctly, devised, before Messrs. Servel and Gonon had perfected their plan, it may suffice to remark, that, up to the present day, all attempts have only served to show how imperfect and slow even very short despatches would be rendered by this mode of communication. Now, in the new system which Messrs. Servel and Gonon have fortunately completed, after great labor and the study of more than twenty years, they have the satisfaction of presenting a work which leaves nothing to be desired on the score of celerity and precision. The following are the results which they promise, and engage to prove:

1. With the telegraphic dictionary of Messrs. Servel and Gonon, and by means of their telegraphs, placed at distances of 4, 6, 8, or 10 leagues, as favorable positions may offer, it will be easy to transmit all imaginable despatches, however long, without the employment of more signals than the despatch shall contain words, and without the possibility of an error being made in explaining the signals, with the aid of the dictionary; by which means all telegraphic despatches may be correctly *(officialement)* communicated.

2. Their telegraphic machinery being very simple, the persons employed can be taught in a very short time, and may soon be capable of making the signals.

3. The advantages which the system of Messrs.

Servel and Gonon possess over all others may be explained in a few words, viz.

All preceding systems have been alphabetical, phraseological, and conventional. Those which are alphabetical are exceedingly tedious, since, to communicate one word containing 17 or 18 letters, (and there are many such in all languages,) 18 or 19 signals will be required. One may thus form an idea of the time necessary to transmit a despatch of 60 to 80 words, which would not be considered a very long one. A system of this kind established in Russia, between St. Petersburg and Cronstadt, a distance of only seven leagues, often requires five or six hours to communicate thirty to forty words. In fine, more than fifty different alphabetical plans, which have come under our notice, have been rejected by the different nations which have tried them, in consequence of their tediousness, and, above all, their irregularity.

The phraseologic and conventional systems have been less numerous, but are more inconvenient, because it is difficult to ascertain with certainty how many phrases and propositions are contained in any one language: they may be said, indeed, to be innumerable.

Sr. Charriere carried out this plan further than any other person. His vocabulary of phrases consisted of fifty-five thousand signals; and, notwithstanding this enormous number, he could never convey accurately the sense of the despatches given to him. All these plans were abandoned as inadequate, when it was desired to establish a regular correspondence.

Messrs. Servel and Gonon are in possession of a system of words, which, by means of a short-hand, *(brachygraphie,)* of their invention, will enable them to communicate, with the greatest precision; all writings, abstruse or not, literally, word for word, that is to say, a despatch of 200 or 300 words can always be communicated by the same number of signals. They have, moreover, the advantage of gaining in an ordinary correspondence, from ten to twenty per cent., an incalculable advantage in long despatches. The only case in which there could be a loss of from three to four per cent., would be when a large number of proper names were contained in one despatch. It might, also, be added, that the true value of a telegraphic system consists in the ability to transmit despatches to a considerable distance with the rapidity of lightning, so as to avoid an interruption by bad weather, which might unexpectedly occur on a long route.

Messrs. Servel and Gonon affirm that it will be very easy to communicate a despatch of about one hundred words, from New York to New Orleans, in the space of half an hour; for, the whole line being once prepared by the first signal, (which would not occupy more than five minutes,) the despatch would then be transmitted by an almost constant action of the telegraphs, which will allow of the transmission of eight or ten words per minute, with the punctuation and orthography very exact.

As the system of Messrs Servel and Gonon may be included among the exact sciences, and, therefore, readily adapted to all living languages, they have decided to submit it to the United States of America; persuaded that so great a nation will receive with favor a work which will enable the Government to learn, in the space of one hour, whatever of importance may occur, either at the north or south.

Should it be desirable to establish a line of night telegraphs, Messrs. Servel and Gonon are happy to have it in their power to offer a system as complete, as enlarged, and quite as rapid, as that for the day line.

Flattering themselves that they are prepared to reply to all inquiries and observations on this subject, Messrs. Servel and Gonon may be permitted to remark, that the employment of cannon, guns, and rockets, can be of no real utility in foggy weather, and will involve a great expense; for, as the stations cannot be placed at a greater distance than one league apart, an enormous number of them would be required on a line of 500 to 600 leagues. And what would be the result? As it would not be possible to obtain the variety and number of signals necessary to carry on every species of regular correspondence, the consequence would be that there could be communicated only certain incidents, few in number, foreseen and arranged alphabetically in a catalogue. We may, therefore, without fear of contradiction, place this plan at the foot of those conventional systems which answer miserably on the coasts, and almost all of which have been abandoned.

With the two systems, one for the day and the other for the night, which the Messrs. Servel and Gonon have the satisfaction to offer, they venture to believe that they can completely satisfy any exigence.

The following will be the cost of establishing a line of telegraphs from New York to New Orleans.

A competent mechanician has engaged to furnish the telegraphs for $160 each, provided he be allowed to furnish the whole number. The whole line will require from 110 to 115.

A carpenter has engaged to complete the small buildings, to accommodate the persons employed and the repeater of the signals, for $200 each; and the scaffolding to support the houses, where necessary, for $100.

Two telescopes will be required for each station, which Messrs. Servel and Gonon will undertake to supply at New York for $28 each.

Thus, 115 telegraphs, at $160,	$18,400
115 small buildngs, at $200,	23,000
230 telescopes, at $28,	6,400
	$47,800

It is believed that very little scaffolding will be required, since in all the towns houses may be probably selected sufficiently elevated on which to place the buildings.

There will be required, in addition, the annual compensation of the persons employed, to the number of three for each station.

WASHINGTON CITY;

THURSDAY, ... JANUARY 11, 1838.

THE EVERGLADES OF FLORIDA.--The few persons who have penetrated into the neighborhood of this region, have represented the climate as most delightful; but, from want of actual observation, could not speak so confidently of the soil, although, from the appearance of surrounding vegetation, a portion of it, at least, must be rich. Whenever the aborigines shall be forced from their fastnesses, as eventually they must be, the enterprising spirit of our countrymen will very soon discover the sections best adapted to cultivation, and the now barren or unproductive everglades will be made to blossom like a garden. It is the general impression that these everglades are uninhabitable during the summer months, by reason of their being overflowed by the abundant rains of that season; but if it should prove that these inundations are caused or increased by obstructions to the natural courses of the rivers, as outlets to the numerous lakes, American industry will remove those obstructions.

We have lately perused a letter from an officer of the army in Florida, dated at Fort Brooke, the latter part of December, and were so much pleased with the description given of his journey to the everglades, that we have obtained permission to make an extract therefrom. The writer says:

"The country this side of Kissimmee is generally a pine barren. On the Kissimmee, the land is rich and beautiful and when I saw the live oak groves, lakes and creeks, with banks lined by cane brakes, like oriental jungles, I, for the first time, appreciated Bartram's glowing description of Florida. It is, indeed, a paradise for savages, and will some day be considered the garden of America. On the banks of the Kissimmee, and the numerous lakes which discharge their water into it, there will be cotton, rice, and sugar plantations, as rich as were those of St. Domingo. On this side of these rich lands, there are high sand hills, with lakes and ponds of good water on their very summits—delightful spots for summer residences, in case the alluvion should prove unhealthy during the summer season. I remained in Colonel Taylor's camp several days, and made excursions in every direction. The famous and undefined everglades commence in that quarter. At this season, the appearance of the everglades is like that of a boundless field of wheat in the yellow or brown. A species of grass, about five feet or upwards in height, covers the earth and extends below the horizon. The country is perfectly level, and the winds, which are always blowing, wave the grass like a troubled sea. Near Fort Gardiner, which is seventy miles due east from here, there are strips of hammock land, and, when the surface rises a little, of pine barren; but the Indians state that in the lower part of the territory, the prairie land stretches to the horizon all round you, except here and there a few spots of wood, called islands.

"We observed numerous trails winding through these prairies, or Hī-ŏk-pō, as they are termed by the Seminoles; and we shall have no difficulty in tracing the Indians through such a country, as nothing but birds can travel without leaving a plain trail."

The late Lieut. T. B. Adams.—An officer of the army in Florida, writing to a friend in this city, thus speaks of the death of his comrade:

"On the 14th inst. Lieut. T. B. Adams, 2d Artillery, died at Fort Dade, from a typhoid form of fever. He was, without exception, the purest man I ever knew. His surgeon says that his constitution had been undermined by the continued exposure to which his duties subjected him. Every attention was paid to him, but it was useless; the disease attacked him on Saturday, and he died on Thursday."

In copying into our last number from the Naval Magazine the article in relation to the U. S. ship Ohio, we did not intend to be understood as endorsing or approving the opinions therein expressed respecting the construction of our ships of war; and particularly that which was rather inferred than directly avowed, that Mr. Eckford was the only scientific naval architect our country has lately produced. We believe that injustice was done in that article to the present Chief Naval Constructor, who is scientifically and practically acquainted with his business; he has been familiar with it from infancy, having been instructed in it under his father, (now living in a green old age) by whom some of our finest frigates, were built. We need but refer to the ship Pennsylvania, universally admitted to be a beautiful specimen of naval architecture, which was planned and mostly built under the superintendence of the present Chief Naval Constructor while he was attached to the Philadelphia Navy Yard.

With respect to the vessels for the Exploring Expedition, about which so much has been said, it is only necessary to remak that they were built *according to order;* that the officer, by whose orders they were planned, was satisfied with their performance. The only objection to them is, that they are dull sailers; but it should be remembered that it was required that they should combine great strength, stowage, and extra cabin accommodations, with *a fair rate of sailing;* the three first it is admitted they possess, but their size was too small to allow of their being in addition, first-rate sailers, which was considered less important than the rest.

Naval Appropriation Bill.—In the House, on Tuesday last, Mr. Cambreleng reported an amendatory bill, making appropriations for the naval service for the year 1838. The differences between it and the bill reported on the 27th ult., are that the item for pay of officers and seamen is reduced to $1,312,000. The item for a hospital at Pensacola is increased to $31,500; and 3,000 are added for building a wall round the magazine at Pensacola.

By the second section of the amendatory bill, the sum of $1,500,000 is transferred from the appropriation made by the act of March 2, 1833, for the gradual improvement of the navy, for the current expenses of the year 1838; and a similar sum is appropriated to restore this amount to the aforesaid fund—one-half payable in 1839, and the other half in 1840.

☞ The report of the Secretary of the Treasury, in relation to a system of Telegraphs for the United States, is an important and valuable document. Desirous to insert as much of it as we could in the present number, we have been compelled to postpone a variety of matter, which shall have place in our next.

Errata.—In the stanzas to Lt. Ingham Wood, published in the Chronicle of Dec. 28, the last word of the 5th verse should be *span* instead of *scan*.

By the transposition of the word "war" in the first paragraph of the communication on the Navy, in the last number, which the reader might easily detect, the sense is destroyed. It should read thus: "that, in after times, when the events of that war were recounted," etc.

RECEIPTS BY MAIL.—Numerous enquiries have been made, whether certain remittances had been received, and why they were not acknowledged. In consequence of being unable to procure paper of a suitable kind in Washington, the covers, on which the receipts are usually printed, have not been issued for several months. A supply being now obtained, the covers, including those omitted, will be issued without delay.

In the legislative proceedings of the Senate of New York, on Friday, the 5th inst. we observe a petition to change the name of ALEXANDER SLIDELL, Lieutenant of the U. S. Navy. We know nothing of the circumstances which prompted this movement, but presume that the motive must be very strong, to induce the owner of so well known and popular a name as that of ALEXANDER SLIDELL to change it for another.

Correspondence of the Army and Navy Chronicle.

U. S. FRIGATE UNITED STATES,
Marseilles, Nov. 24, 1837.

You have with this a list of officers. We are here, after having landed Gov. CASS and family, who have just returned from a trip to the East in the Constitution. They have had an opportunity during the summer of seeing most of the important cities on the coasts of Syria, Egypt, Palestine, Greece, etc., as well as Constantinople. They are all in good health.

The Constitution is now at Mahon; the Shark has gone to Malta; and we sail to-day for Mahon. We are all well, and have nothing new to communicate. Our own summer's cruise, as you no doubt know, was in the Atlantic, having visited Terceira, (one of the Western groupe,) Madeira, Teneriffe, Cadiz, Lisbon, etc., etc.

List of officers on board the U. S. frigate United States.

JESSE WILKINSON, *Captain.*

Lieutenants, Z. F. Johnston, A. G. Gordon, H. H. Rhodes, C. H. McBlair, J. A. Davis, C. Heywood *Surgeon*, G. R. B. Horner. *Asst. Surgeon*, V. L. Godon. *Purser*, D. Walker. *Chaplain*, T. R. Lambert. *Acting Master*, B. W. Hunter. *Lieut. Marines*, B. E. Brooke.

P. Midshipmen, C. Steedman, J. Humphreys, F. E. Barry, C. Thomas, D. Lynch, Jr.

Midshipmen, W. C. Craney, J. R. M. Mullany, J. D. Todd, A. S. Whittier, C. S. Macdonough, G. H. Preble.

Captain's Clerk, R. Robertson. *Boatswain*, W. Hart. *Gunner*, S. Allen. *Carpenter*, R. Thomas. *Sailmaker*, J. C. O'Conner.

Extract of a letter from an officer of the army to a frind in this city, dated

BLACK CREEK, *Dec.* 26, 1837.

"By the latest information received from Fort Mellon, and from private letters from my friends at Lake Harney, I learn that all the troops were at the latter place on the 23d December. Gen. Hernandez, with the Tennesseeans, on the east of the St. John's river, and Gen. Eustis, with the 2d Dragoons and the 3d and 4th Artillery, on the west side. On the march from Lake Monroe, the army passed a great many villages, but they had all been deserted; and the Indians have, doubtless, gone further South. The army was to move on the 24th or 25th inst.—that is to say, Gen Jesup, with the mounted force, will push forward to join Col. Taylor on the Kissimee.

"By the express from Tampa, we have received particulars of an engagement between a party of Indians and a detachment of Dragoons under Lieut. Saunders. Lieut. Hardia was severely wounded, and amputation of the limb was necessary."

ITEMS.

The packet ship Susquehannah, for whose fate so much apprehension was felt on account of an alleged piracy off the Capes of Delaware, arrived safely at Liverpool, from Philadelphia, on the 14th of November.

The Philadelphia Pennsylvanian says, that a contract has been entered into by the General Government for the live oak timber of two steamers, one small vessel, and two sloops of war, to be built at that port, for the service of the United States.

A French squadron, intended for Saint Domingo, has sailed from Brest, under the command of Admiral De la Bretynniere. It is composed of the Nereide frigate and four brigs, Oreste, Griffon, Nisus, and Cuirassier.

Major General SCOTT and Commodore STEWART have been on a visit to this city. The former left on Saturday, for the Niagara frontier, and arrived in New York on Sunday night.

The total number of Revolutionary Pensioners under the various acts of Congress, is 41,788, of whom nearly one fortieth part, or 904, are from the little State of Rhode Island. Of these pensioners, 1645 died during the last year. The whole sum appropriated to the pension service is $2,037,227.

There were received and assorted at the New York Post Office on Friday, 11,381 ship letters, and on Saturday 9,972. Total in two days, 20,353. A very unusual number.

The number of ships, brigs, &c., navigating the waters of Lake Erie, is 300, of steamboats 42, and of canal boats 256. On board of these vessels, 5,152 men are employed.

There are employed in navigating the Ohio and Mississippi rivers, 638 steamboats, and 6,000 flat and keel boats, on board of which about 50,000 men are employed.

The number of recruits enlisted in the army from the 1st January to the 31st October, 1837, was 4,216. Of these 1,627 were raised in New York.

The aggregate force under the command of Gen. Jesup, in Florida, amounts to 8,993: consisting of 4,637 regular, 4,078 volunteers, 100 seamen, and 178 Indians.

The Revenue Cutter Hamilton, Lieut. Scott, sailed from Boston on Friday morning, agreeably to instructions, to furnish assistance to vessels on the coast. She has on board supernumerary seamen, and an abundant supply of provisions, water, &c.

Correspondence of the N. Y. Journal of Commerce.

MARSEILLES, Nov. 25.—Gen. Cass arrived here on the 19th, on board the United States, and left on the 23d for Paris. The United States sailed for Mahon the 23d, all well. The Constitution was at Mahon, repairing.

ARRIVALS AT WASHINGTON.

Dec. 28—Lieut. R. W. Lee, 3d Arty.	Fuller's
Jan. 7—Capt. B. Huger, Ordn.	Mr. Poinsett's
10—Capt. J. Bradley, 2d Inf.	Gadsby's
Capt. Th. Swords, 1st Drags.	Fuller's

LETTERS ADVERTISED.

NORFOLK, Jan. 1, 1838.

NAVY—Dr. J. Alex. Lockwood; Lieuts. Murray Mason, John Magruder; Midshipmen C. St. Geo. Noland, Robert Townsend, Robert Muron, Henry Johnson, Wm. R. Postell, R. H. Lowndes, Jno. B. Randolph, Wm. A. Miller, Edward G. Larkin, Henry J. Paul.

PROCEEDINGS OF CONGRESS, IN RELATION TO THE ARMY, NAVY, &c.

SENATE.

TUESDAY, JAN. 2.

The following petitions were presented and referred:

By Mr. ROBINSON, for the establishment of a Western armory on the Wabash.

By Mr. RIVES: from the citizens of the District of Columbia, praying the abolition of spirit drinking in the Army and Navy.

By Mr BUCHANAN: from citizens of the city and county of Philadelphia, for a Dry Dock in the navy yard there.

Mr. BENTON offered a resolution, calling on the Secretary of War for the surveys of certain rivers in Missouri, with the estimates.

The resolution before offered by Mr. DAVIS, calling on the Secretary of War for information, in detail, in relation to the Florida war, was taken up and adopted.

Mr. BUCHANAN presented two memorials from a number of the citizens of the city and county of Philadelphia, stating that, by a recent order of the Navy Department; 500 persons had been discharged from employment; and praying that they might be employed on an unlaunched frigate called the Raritan, which was now in a course of decay.

After some remarks by Messrs. BUCHANAN and PRESTON, the memorials were referred.

WEDNESDAY, JAN. 3.

The VICE PRESIDENT laid before the Senate reports from the War Department, relating to certain Indian treaties, and to the state of security of the Western frontier; transmitted in reply to resolutions of enquiry from the Senate.

Mr. RIVES presented a memorial from numerous officers of the Navy, remonstrating against the reinstatement in the service, of officers of the navy after having been discharged, or having resigned.

SATURDAY, JAN. 6.

On motion of Mr. DAVIS,

Ordered, That the Secretary of the Navy cause to be printed an edition of two thousand copies of the report embracing Professor Hassler's survey of the coast, for the use of the Government, and for distribution.

TUESDAY, JAN. 9.

Mr. BENTON reported a bill to increase the Army of the United States, [in the same words as that of the last session.]

HOUSE OF REPRESENTATIVES.

TUESDAY, JAN. 2.

The following resolution, moved by Mr. DAWSON, on the 18th of last month, was taken up:

Resolved, That the Secretary of War be directed to communicate to this House what number of the Cherokee tribe of Indians are yet remaining within the limits of the State of Georgia; how many have gone west of the river Mississippi, in conformity to the late treaty between that tribe and the Government of the U. S.; whether he apprehends any difficulty in removing those who yet remain, when the time stipulated in the treaty for their removal shall arrive; what portion, if any, of said tribe has signified their intention not to conform to said treaty; whether he has any information in his Department indicating a hostile intent among said Indians towards the citizens of Georgia, and whether he has any reason which may incline him to apprehend that said Indians, or any part of them, may commit acts of violence upon the citizens, or depredations on their property, about the time they shall be required by the treaty to remove; what military force he has established in that section of the Union to secure the enforcement of the treaty, if necessary, and to prevent acts of violence or depredations by the Indians; whether he anticipates an increase of military strength in that section, to what extent, and at what time; and that the Secretary be requested to say whether any precautionary measures should be adopted, on the part of Congress, to aid his Department in causing the execution of the treaty with the Cherokee tribe of Indians, and preventing acts of violence and depredations from said Indians, or any part of them.

The resolution was modified by striking out the words "State of Georgia," and inserting the words "said tribe of Indians east of the Mississippi river;" and, so modified, was adopted.

THURSDAY, JAN. 4.

Mr. GRANTLAND, from the Committee on Naval affairs, reported a bill for the relief of Dudley Walker.

Mr. MILLIGAN, from the same committee, reported a bill for the relief of Samuel Hambleton.

Mr. HOWARD offered the following resolution, which lies over one day:

Resolved, That the President of the United States be requested to communicate to this House, as far as the same may be consistent with the public interest, all the information in either of the Departments respecting the capture by the United States sloop of war Natchez of the Mexican vessel of war the General Urrea, and its subsequent restoration by the U. S. to the Mexican Government.

FRIDAY, JAN. 5.

The resolution offered yesterday by Mr. HOWARD, was taken up for consideration.

Mr. ADAMS moved an amendment to the resolution, as follows:

And also copies of all instructions to the officers of the Government of the United States, and all correspondence with them, with the Governors of the State, and with the Governments and officers of Mexico and Great Britain, concerning the preservation of the neutrality of the United States, in the civil wars and insurrections in Mexico, and in any of the British provinces north of the United States; since the year 1829, and particularly of a letter from the President of the United States to the Secretary of the Territory of Arkansas, dated on or about the 10th of December, 1836.

Mr. FILLMORE moved to amend the amendment by adding thereto the following:

And that the President be requested to communicate to this House any information in his possession, of acts endangering the amicable relations between this Government and that of Great Britain, either by the subjects of Great Britain, or by our own citizens on the Canadian frontier; and what measures have been adopted by the Executive to preserve our neutrality with said kingdom, or repel invasion from a foreign country.

The amendments were severally agreed to, and the resolution, as amended, was adopted.

Mr. CAMBRELENG, from the Committee of Ways and Means, reported a bill making appropriations for the suppression of Indian hostilities for the year 1838.

Mr. COLES, from the Committee on Military Affairs, reported the following, which was agreed to:

Resolved, That the Committee on Military affairs be instructed to inquire into the expediency of carrying into effect the resolutions of the Continental Congress, granting monuments to the memory of the General officers of the Revolutionary army, and a resolution to erect a marble column at Yorktown, Virginia.

Mr. INGHAM, from the Committee on Naval Affairs, reported the following, which was agreed to:

Resolved, That the unfinished business of the Committee on Naval Affairs during the 24th Congress be referred to the Committee on Naval Affairs for consideration.

Mr. REED, from the same committee, reported the following, which was agreed to:

Resolved, That the Secretary of War be directd to lay before this House, a chart in a reduced form, of the harbor of Provincetown, in the State of Massachusetts.

MONDAY, JAN. 8.

The SPEAKER laid before the House a Message from the President of the United States transmitting reports from the Secretary of State and the Secritary of the Navy, respecting the capture and restoration of the Mexican brig of war Gen. Urrea, in answer to a resolution of the House of the 5th instant.

Mr. MCCLELLAN, of N. Y. presented the petition of Daniel Reynolds and brothers, of Kinderhook, N. Y. setting forth that they have invented an engine to throw balls without the use of gonpowder; and that the machine will prove a powerful engine of national defence, and praying Congress to purchase the patent. Referred to the Committee on Military Affairs.

The SPEAKER laid before the House a communication from the War Department, transmitting a report of the 2d Auditor, showing the expenditures of the appropriation for the contingent expenses of the military establishment during 1837.

TUESDAY, JAN. 9.

Mr. CAMBRELENG, from the Committee of Ways and means reported an amendatory bill, making appropriations for the Naval service for 1838.

ARMY.

OFFICIAL.

SPECIAL ORDERS.

No. 1. Jan. 4—Asst. Surgeon J. B. Porter, Fort Leavenworth.

Asst. Sur. W. Hughey, tem. duty, Baltimore.

No. 2. Jan 6—Asst. Surgeon Porter to accompany a detachment of recruits to the Niagara frontier.

Asst. Sur. Heiskell to report to Gen. Scott.

Lieuts. M. S. Miller and R. W. Lee, 3d Arty., to Niagara frontier.

RESIGNATIONS.

Captrin Levi M. Nute, 6th Infy. Jan. 31, 1838.
2d Lieut. Robert H. Archer, 4th Arty. Dec. 31, 1837.

APPOINTMENTS—ORDNANCE STOREKEEPERS.

Virgil David, Dec. 22, 1837, Pikesville arsenal, Md.
James S. Abeel, Jan. 6, 1838, Rome arsenal, N. Y.

NAVY.

ORDERS.

Jan. 4—P. Mid. F. Clinton, to Washington, on duty connected with coast survey.

5—Lieut. W. Green, Rendezvous, Norfolk.

Mid. C. S. Throckmorton, W. I. squadron.

8—Mid. E. C. Kennedy, Navy Yard, Norfolk.

Mid. C. Robinson, Naval School, do.

9—Lieut. S. Lockwood, detached from Ex. Ex.

10—Mid. Allen McLane, Naval School, New York.

Mid. N. Barnes, detached from frigate Columbia.

DISMISSION.

Benjamin T. Wilson, Acting Midshipman, Jan. 10, 1838.

VESSELS REPORTED.

Ship Fairfield, Capt. Mayo, sailed from Rio de Janeiro, Nov. 17, for Bahia; brig Dolphin, Lt. Comd't Purviance, from Buenos Ayres, arrived at Rio same day.

Ship Independence, Com. Nicolson, arrived off Pernambuco, Nov. 15.

Frigate United States, Captain Wilkinson, at Marseilles, Nov. 19; sailed on the 24th for Mahon.

MARRIAGES.

At Bristol, R. I., on the 26th ult., EDWARD CARRINGTON BOWERS, of U. S. Navy, to Miss MARY ANN P. COFFIN, daughter of PETER COFFIN, Esq. of Boston.

On the 6th inst., Lieut. ROBERT H. ARCHER, of the U. S. Army, to ELIZABETH M. eldest daughter of the Hon. STEVENSON ARCHER, of Harford County, Maryland.

DEATHS.

In Washington, on the 4th inst. Dr. R. M. BALTZER, Passed Assistant Surgeon, U. S. navy.

At Brooklyn, N. Y. on the 2d inst. JAMES M. HALSEY, Purser of the United States Navy, aged 50 years.

At the U. S. Navy Yard, near Pensacola, on the 5th ult., of pulmonary consumption, Mr. JOHN G. CASSEDY, Secretary to the Commandant, in the 26th year of his age, a native of Washington, D. C.

In Norfolk, on the 27th ult., Mr. WILLIAM ANDERSON, son of the late Col. WM. ANDERSON, of the U. S. Marine Corps, in the 20th year of his age.

At Rome, N. Y., on the 30th ult. Captain SAMUEL PERKINS, ordnance storekeeper.